

# TNF $\alpha$ (H-156): sc-8301

## BACKGROUND

Tumor necrosis factor  $\beta$  (TNF $\beta$ ), also known as lymphotoxin, is a pleiotropic cytokine. TNF $\alpha$ , also known as cachectin, is a smaller cytokine that binds to the same receptors, producing a vast array of effects similar to those of TNF $\beta$ . TNF $\beta$  and TNF $\alpha$  share 30% amino acid homology and have similar biological activities. TNF $\beta$  is produced by activated lymphocytes, including CD4<sup>+</sup> T helper cell type 1 lymphocytes, CD8<sup>+</sup> lymphocytes and certain B lymphoblastoid cell lines. TNF $\alpha$  is produced by several different cell types, which include lymphocytes, neutrophils and macrophages. TNF $\alpha$  and TNF $\beta$  can modulate many immune and inflammatory functions, while having the ability to inhibit tumor growth. Target tumor cells must express TNF receptors 1 and 2 to be killed, with the p55 receptor mediating the cytotoxic response.

## CHROMOSOMAL LOCATION

Genetic locus: TNFA (human) mapping to 6p21.33.

## SOURCE

TNF $\alpha$  (H-156) is a rabbit polyclonal antibody raised against amino acids 77-233 of TNF $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

TNF $\alpha$  (H-156) is recommended for detection of TNF $\alpha$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TNF $\alpha$  (H-156) is also recommended for detection of TNF $\alpha$  in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TNF $\alpha$  siRNA (h): sc-37216, TNF $\alpha$  shRNA Plasmid (h): sc-37216-SH and TNF $\alpha$  shRNA (h) Lentiviral Particles: sc-37216-V.

Molecular Weight of transmembrane TNF $\alpha$ : 26 kDa.

Molecular Weight of soluble TNF $\alpha$ : 17 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-937 cell lysate: sc-2239 or K-562 whole cell lysate: sc-2203.

## STORAGE

Store at 4 $^{\circ}$  C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

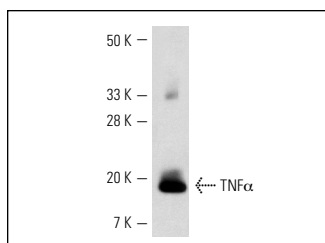
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

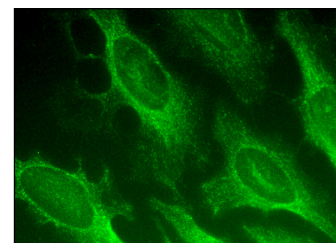
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



TNF $\alpha$  (H-156): sc-8301. Western blot analysis of human recombinant TNF $\alpha$ .



TNF $\alpha$  (H-156): sc-8301. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization.

## SELECT PRODUCT CITATIONS

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- Luedde, T., et al. 2005. Deletion of IKK2 in hepatocytes does not sensitize these cells to TNF-induced apoptosis but protects from ischemia/reperfusion injury. *J. Clin. Invest.* 115: 849-859.
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- Lu, Y., et al. 2007. Immunological protection against HPV16 E7-expressing human esophageal cancer cell challenge by a novel HPV16-E6/E7 fusion protein based-vaccine in a Hu-PBL-SCID mouse model. *Biol. Pharm. Bull.* 30: 150-156.
- Giannopoulou, M., et al. 2008. Hepatocyte growth factor exerts its anti-inflammatory action by disrupting nuclear factor- $\kappa$ B signaling. *Am. J. Pathol.* 173: 30-41.
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Try **TNF $\alpha$  (C-4): sc-133192** or **TNF $\alpha$  (E-4): sc-133193**, our highly recommended monoclonal alternatives to TNF $\alpha$  (H-156). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **TNF $\alpha$  (C-4): sc-133192**.